

Appl. No. 10/682,088

Reply to Office Action of October 12, 2007

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**REMARKS/ARGUMENTS****Status of Claims**

Claims 1 to 29 are currently pending in the application.

**35 U.S.C. § 103(a) Rejections**

The law on obviousness under 35 U.S.C. 103 was recently addressed in *KSR Int'l v. Teleflex, Inc.*, No. 04-1350, slip op. at 14 (U.S., Apr. 30, 2007). Following this, examination guidelines were released by the USPTO on October 10, 2007 in regards to determining obviousness under 35 U.S.C. 103. According to these guidelines, the framework for the objective analysis for determining obviousness under 35 U.S.C. 103 is stated in *Graham v. John Deere Co.* 383 U.S. 1,148 USPQ 459 (1966). Obviousness is a question of law based on underlying factual inquiries. The factual inquiries enunciated by the Court are as follows:

- (1) Determining the scope and content of the prior art;
- (2) Ascertaining the differences between the claimed invention and the prior art; and
- (3) Resolving the level of ordinary skill in the pertinent art.

The Graham factors, including secondary considerations when present, are the controlling inquiries in any obviousness analysis. Once the findings of fact are articulated, Office personnel must provide an explanation to support an obviousness rejection under 35 U.S.C. 103.

According to KSR, for the Patent Office to properly combine references in support of an obviousness rejection, the Patent Office must identify a reason why a person of ordinary skill in the art would have sought to combine the respective teachings of the applied references.

Applicant's analysis below demonstrates that the Examiner has failed to properly conform to the aforementioned guidelines for a finding of obviousness under 35 U.S.C. 103.

Appl. No. 10/682,088

Reply to Office Action of October 12, 2007

**Claims 1 to 8, 11 to 18 and 21 to 29**

The Examiner has stated that claims 1 to 8, 11 to 18 and 21 to 29 are unpatentable under 35 U.S.C. 103(a) over Jabbari (U.S. Patent No. 7,061,896) in view McAllister et al. (U.S. Patent Publication No. 2001/0010681) and Shoaib et al. (U.S. Patent No. 7,161,914).

**Claim 1****Missing Elements**

The following is a discussion of why the cited references do not disclose all the elements of the rejected claims. While it may be considered that "the mere existence of differences between prior art and an invention does not establish the invention's non-obviousness", Office personnel must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one skilled in the art (Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in *KSR international Co. v. Teleflex Inc.*, published in Federal Register Vol. 72, No. 195 October 10, 2007). As such, if elements from a claim are not disclosed by the combination of cited references and no valid reasoning is provided why the missing elements would be obvious, this may provide a strong basis for why a claim should not be rejected based on obviousness.

With regard to claim 1, the Examiner alleges that Jabbari teaches routing packets from a wireless communications terminal, which is recited in the preamble of claim 1, in the form of wireless ATM, col. 1, lines 34-44. Applicant respectfully submits that what Jabbari discloses in the Background of the Invention section of the patent is that "Considerable research has been carried out to extend ATM services to mobile terminals mostly with the assumption that ATM connections terminate at the wireless users. For example, Wireless-ATM (WATM), may extend the ATM signalling and control framework to support mobility". Jabbari merely suggests that "ATM signalling and control framework" may be extended to support mobility, there is no specific disclosure of a wireless device being capable of performing routing in the wireless device, being configured to perform routing in the wireless device, or actually performing routing in the wireless device. The Examiner concedes that Jabbari is silent on the method steps of receiving, selecting, and supplying that are recited in claim 1. If Jabbari discloses a wireless

Appl. No. 10/682,088

Reply to Office Action of October 12, 2007

terminal routing packets without performing any of the actual steps recited in the claim 1, Applicant submits that Jabbari cannot be relevant to the claimed invention.

It is alleged that McAllister et al. discloses "selecting a route via the network for packets from the terminal in dependence upon the network information and information dependent upon wireless communications between the terminal and at least one of the nodes; and supplying packets with information relating to the selected route". The Examiner specifically points to the Background of the Invention section that refers to a publication by E.M. Spiegel, that discloses "an alternate path routing scheme based on a combination of progressive control and source routing". Source routing is utilized to effect the path computation. A determined routing path together with a cost threshold and a crank back limit are included in a setup message of a packet and this is forwarded along the determined routing path. Once the method encounters a blocked link, it is the responsibility of an intermediate node at which the packet and setup message are stopped to determine another route in the network to allow the packet to reach the desired endpoint.

The Examiner alleges that the limitation "in dependence upon the network information and information dependent upon wireless communications between the terminal and at least one of the nodes" is disclosed by McAllister in that E.M. Spiegel discloses that the source routing utilized for path routing "is a function of link cost and quality of service". Network information is information regarding the network that is received in the receiving step of the claim. Information dependent upon wireless communications between the terminal and at least one of the nodes is information that is not forwarded from other nodes regarding the link, but readily determined by the terminal itself in communication with at least one other node. Therefore, routing decisions are based on information about links in the network for which the wireless node is not directly connected, the information being received over wireless links and information readily determined by the terminal itself in communication with at least one other node. There is no suggestion or specific disclosure in McAllister et al. of using both a) information about links in the network which is received over wireless links and b) information readily determined by the terminal itself in communications with at least one other node.

The Examiner concedes that the combination of Jabbari and McAllister et al. is silent on

Appl. No. 10/682,088

Reply to Office Action of October 12, 2007

the step of "receiving, via a respective wireless link from at least one of a plurality of wireless access nodes forming a network, network information relating to links between the nodes". The Examiner alleges that Shoaib et al. discloses wireless communications and a receiving step equal to that recited in the present application.

The Examiner alleges that Shoaib et al. discloses the receiving step at column 2, lines 4-12. This portion of Shoaib et al. discloses a mobile terminal being provided information about network topology and target base stations by a location server that continuously updated this information for base stations in a certain geographical area. While Shoaib et al. may be considered to receive information about the network topology and target base stations that appears similar to what is recited in claim 1, Shoaib et al. as a whole is directed to using this information for controlling handoff processes, not specifically for the purpose of a wireless device using the information for routing packets through the network.

For at least the reasons discussed above, Applicant respectfully submits that the combination of Jabbari, McAllister et al. and Shoaib et al., do not teach all the limitations recited in claim 1, as alleged by the Examiner. Furthermore, the Examiner has failed to explain why the missing features would be obvious to one skilled in the art. Without all the limitations of claim 1 being disclosed by the three references and not reason provided by the Examiner why these missing limitations would be obvious, it is not reasonable to expect to arrive at the invention in the manner claimed.

#### Reason to Combine

Once the scope of the prior art is ascertained, the content of the prior art must be properly combined. An obviousness inquiry requires review of a number of factors, including the background knowledge possessed by a person having ordinary skill in the art, to determine whether there was an apparent reason to combine the elements of the prior art in the fashion claimed by the present invention. For the Patent Office to combine references in support of an obviousness rejection, the Patent Office must identify a reason why a person of ordinary skill in the art would have combined the references *KSR Int'l v. Teleflex, Inc.*, No. 04-1350, slip op. at 14 (U.S., Apr. 30, 2007), *Id.* at 15. Even if the Patent Office is able to articulate and support a

Appl. No. 10/682,088

Reply to Office Action of October 12, 2007

suggestion to combine the references, it is impermissible to pick and choose elements from the prior art while using the application as a template.

Applicant submits that there is no suggestion of a desirability of the claimed invention in the references that would serve as a reason for one skilled in the art to combine the references.

The Examiner alleges that it would have been obvious to modify the system of Jabbari by performing the source routing disclosed by McAllister et al.. It is alleged such a modification would benefit the system by allowing the wireless terminal to determine an optimal path for routing its packets. While such a combination may "benefit" the system, as alleged by the Examiner, Applicant submits that the Examiner has failed to provide a reason why one skilled in the art would arrive at the conclusion that it may benefit the system, that is the Examiner has not fully established that one skilled in the art would recognize that such a combination would be beneficial.

Furthermore, Applicant submits that McAllister et al. does not disclose making a routing decision exclusively at the terminal, but instead relies upon progressive control exerted by one or more intermediate nodes along the routing path. An intermediate node that is unable to forward a call over the determined routing path due to congestion or physical failure makes a decision to re-route the call. However, if the node cannot make the decision to re-route the call in a forward direction toward the destination, it sends a crank back message back along the routing path to allow a proceeding node to make a decision to re-route the call. Applicant submits that one skilled in the art would not combine Jabbari and McAllister et al. in the manner suggested by the Examiner, as McAllister et al. relies on intermediate nodes in the routing path to make routing decisions.

In addition, Applicant submits that the Examiner's selection of Jabbari is based on hindsight solely for its alleged disclosure of a wireless terminal for routing packets. The Examiner concedes that Jabbari does not disclose the steps of receiving, selecting and supplying, which are the entire set of method steps performed by the wireless device. As Jabbari does not disclose any of the active method step limitations of claim 1, it is improbable that one skilled in the art would consider such a reference in attempting to arrive at the claimed invention.

Appl. No. 10/682,088

Reply to Office Action of October 12, 2007

The Examiner further alleges that it would have been obvious to modify the combined system of Jabbari and McAllister et al. by having the network send update network information, as disclosed in Shoaib et al.. It is alleged such a modification would benefit the system by insuring that the terminal has updated information in order to make the routing decision. While such a combination may "benefit" the system, as alleged by the Examiner, applicant submits that the Examiner has failed to provide a reason why one skilled in the art would arrive at the conclusion that it may benefit the system, that is the Examiner has not fully established that one skilled in the art would recognize that such a combination would be beneficial.

Furthermore, Applicant submits that one skilled in the art would not be motivated by the alleged benefit suggested by the Examiner as Shoaib et al. merely teaches a mobile terminal obtaining information, there is no context of routing packets based on that information. Applicant submits that the Examiner has simply selected limitations in hindsight from Shoaib et al. that appear to be equivalent to those recited in claim 1.

For at least the reasons discussed above, Applicant submits that the Examiner has failed to establish a suitable reason why a person of ordinary skill in the art would have combined the references, as required by the Supreme Court's recent decision in *KSR*.

It is respectfully submitted that the 35 U.S.C. §103(a) rejection of claim 1 is deficient for its failure to comply with the U.S. Supreme Court's requirements recently articulated in *KSR*.

For at least the reasons discussed above, Applicant submits that claim 1 patentably distinguishes over the cited references of Jabbari, McAllister et al. and Shoaib et al.. It is respectfully requested that the Examiner reconsider and withdraw the obviousness rejection to claim 1.

## Claim 2

### Missing Elements

Claim 2 is dependent upon claim 1 and includes the additional limitation "in the terminal, monitoring a status of the selected route". The Examiner alleges that McAllister et al. discloses this limitation in paragraph [0009], in the form of a connection setup message being

Appl. No. 10/682,088

Reply to Office Action of October 12, 2007

cranked back to an earlier node in a routing path and that node trying to re-route the setup message. There is no suggestion or disclosure in paragraph [0009] that the routing scheme proposed by E.M. Spiegel, which is being discussed in McAllister et al., includes crank back all the way back to a wireless terminal. Furthermore, even if the setup message was cranked back all the way to the wireless terminal, which the Applicant does not concede, there is no suggestion or disclosure that this results in any kind of "monitoring of the selected route" being performed by the wireless terminal.

#### Reason to Combine

For at least the reasons discussed above with regard to the rejection to claim 1, Applicant submits that there is insufficient reason to combine the references as alleged by the Examiner.

Furthermore, as an additional reason why there is insufficient reason to combine the references, since McAllister et al. is silent on "in the terminal, monitoring a status of the selected route", and the portion of McAllister et al. cited by the Examiner discloses that nodes along the selected path are used to re-route the connection set-up message, Applicant submits that McAllister et al. teaches away from a wireless terminal performing any "monitoring of the selected route", as the wireless terminal is relying on the nodes along the routing path to manage routing the setup message.

For at least the reasons discussed above, Applicant submits that claim 2 patentably distinguishes over the cited references of Jabbari, McAllister et al. and Shoaib et al.. It is respectfully requested that the Examiner reconsider and withdraw the obviousness rejection to claim 2.

#### Claims 3 and 15

#### Missing Elements

Claim 3 is dependent upon claim 1 and includes the additional limitation "in the terminal, receiving and monitoring network information to determine a status of the selected route and, selectively in dependence upon the determined status, selecting a new route via the

Appl. No. 10/682,088

Reply to Office Action of October 12, 2007

network for packets from the terminal". The Examiner alleges that McAllister et al. discloses this limitation in paragraph [0009], in the form of a connection setup message being cranked back to an earlier node in a routing path and that node trying to re-route the setup message. There is no suggestion or disclosure in paragraph [0009] that the routing scheme proposed by E.M. Spiegel, which is being discussed in McAllister et al., includes crank back all the way back to a wireless terminal. Furthermore, even if the setup message was cranked back all the way to the wireless terminal, which the Applicant does not concede, there is no suggestion or disclosure that this results in any kind of "monitoring of the selected route" is performed by the wireless terminal. In addition, there is no suggestion or disclosure in McAllister et al that the wireless terminal selects a new route via the network for packets from the terminal selectively in dependence upon the determined status as recited in claim 3.

Reason to Combine

For at least the reasons discussed above with regard to the rejection of claim 1, Applicant submits that there is insufficient reason to combine the references as alleged by the Examiner.

Furthermore, as an additional reason why there is insufficient reason to combine the references, Applicant submits that for similar reasons discussed above with regard to the rejection of claim 2, McAllister et al. teaches away from what is recited in the additional limitation of claim 3.

Claim 15 recites similar subject matter to claim 3 and patentably distinguishes over the combination of references for at least the same reasons discussed above.

For at least the reasons discussed above, Applicant submits that claims 3 and 15 patentably distinguish over the cited references of Jabbari, McAllister et al. and Shoaib et al.. It is respectfully requested that the Examiner reconsider and withdraw the obviousness rejection to claims 3 and 15.

Claims 14 and 24 are additional independent method claims that recite respective methods which are performed in the terminal. Claim 27 is an independent claim directed to a



Appl. No. 10/682,088

Reply to Office Action of October 12, 2007

method of "routing packets from a wireless communication terminal via nodes of a network" wherein the steps are controlled by the wireless communication terminal. Claim 28 is an independent claim directed to a method of communication in a wireless access node of a network wherein the node receives packets including routing information selected by the wireless communication terminal. As claims 14, 24, 27 and 28 all pertain to a wireless terminal operating in a similar fashion to claim 1, Applicant submits that claims 14, 24, 27 and 28 patentably distinguish over Jabbari, McAllister et al. and Shoaib et al..

Claims 4, 8, 11 to 13, 21 and 22 are dependent, either directly or indirectly, on claim 1. Claims 16 to 18 and 23 are dependent, either directly or indirectly, on claim 14. Claims 25 to 26 are dependent, either directly or indirectly, on claim 24. Claim 29 is dependent on claim 28. For at least the reason of their dependence on claims 1, 14, 24 and 28, Applicant submits that dependent claims 4 to 8, 11 to 13, 16 to 18, 21 to 23, 25, 26 and 29 patentably distinguish over the combination of Jabbari, McAllister et al. and Shoaib et al. It is respectfully requested that the Examiner reconsider and withdraw the obviousness rejection to the identified dependent claims.

#### **Claims 9, 10, 19 and 20**

Claims 9, 10, 19 and 20 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Jabbari, McAllister et al. and Shoaib et al. and in view of various other references. To begin, claims 9 and 10 depend indirectly on claim 1 and claims 19 and 20 depend directly on claim 14. In view of Applicant's submission regarding the 35 U.S.C. 103 rejection of claim 1 and 14, dependent claims 9, 10, 19 and 20 should also be patentable.

In view of the above discussion, the Examiner is respectfully requested to withdraw the 35 U.S.C. 103 rejections of the claims 9, 10, 19 and 20.

Appl. No. 10/682,088

Reply to Office Action of October 12, 2007

In view of the foregoing, early favorable consideration of this application is earnestly solicited.

Respectfully submitted,

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RAB:MSS:mcg